MCAD HAZARDOUS ENERGY CONTROL PROGRAM (Lockout and Tagout)

GENERAL

Lockout and/or tagout are the methods of isolating machines and equipment from hazardous energy sources. This program describes the procedures that meet the requirements of the OSHA Standard 29CFR 1910.147. This procedure defines the use of lockout and tagout at MCAD.

Employees may not inspect, clean, repair a machine or equipment that has hazardous energy sources that could cause injury until all hazardous energies and supply lines are disconnected and the primary control switch or valve is locked out. If it is not possible to apply a lockout device then the machine or equipment must have a warning tag (tagout) that states **"DANGER – DO NOT OPERATE**".

DANGER – DO NOT OPERATE tags are to be used only for the purpose described in this section. Other tags descriptors shall be used for identifying defective tools and equipment, controlling access and restricting use for other purposes.

Hazardous energies and supply lines include electricity, gas and hydraulic pressure, dangerous gas or liquids, chemicals and other potential sources of hazards.

1. Tags shall be used when performing maintenance work on or near equipment that, if operated, will expose personnel to a potential hazard.
2. When inadvertent operation of a switch, valve, or control would create a direct hazard, OHSA specifically requires the use of lockout to prevent injury.
3. Tags and locks shall be attached to primary disconnecting devices. They shall be removed only by the person identified on the tag or lockout.
4. Any equipment with a "**DANGER - DO NO OPERATE**" tag attached to the control device must not be operated.

PURPOSE

This procedure establishes the minimum requirements for the application of lockout or tagout devices to isolate potentially hazardous energy sources during maintenance activities. The procedure shall be used to ensure that machinery or equipment will be isolated from all potentially hazardous energy prior to inspecting, cleaning, or repairing.

DEFINITIONS

Affected Employees: Those who are not authorized to apply or remove locks and tags should be knowledgeable regarding the reasons for the use of lockout/tagout procedures on the equipment they may operate or use. They must understand the importance and need for lockout/tagout before operating equipment. They must not restart locked or tagged equipment until tags and locks are removed.

Authorized Employees: Lockout/tagout will be performed only by authorized employees who are (a) trained to recognize hazardous energy sources and (b) isolate and control these energy sources to prevent accidents and injury.

Lockout: The placement of a lockout device on an energy isolating device , in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout Device: A device that utilizes a positive means such as a lock which is placed on an energy isolating device in a safe position which prevents the energizing of a machine or equipment. The lockout device shall identify the employee applying the device.

Other Personnel: Are those who are not involved with lockout/tagout, but may come into areas where lockout/tagout procedures may be applied. The Supervisor or Authorized Employee responsible for performing the work requiring lockout/tagout must inform others that equipment is not be used.

Supervisor: The supervisor shall identify authorized and affected employees in the department requiring lockout/tagout training. Every new employee in the department shall be instructed in the use and purpose of lockout/tagout.

Tagout: The placement of a tagout device on an energy isolating, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the device is removed.

Tagout Device: A prominent warning device, such as a tag, a means of attachment (self locking and non-releasable with a minimum unlocking strength of no less than 50 lbs – example; a one piece nylon cable tie), which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed. Tagout devices shall indicate the identity of the employee applying the device.

Training Coordinator: Training will be conducted initially and on an annual basis for all employees covered by this policy. The Occupational Health and Safety Coordinator will coordinate the training and maintain documentation of training.

TRAINING

Each department that that has lockout/tagout work performed or are otherwise affected by the application of this program shall provide training to ensure that the purpose and function of the hazardous energy control program is understood by their employees. This training will include the following and will be provided by the Occupational Health & Safety Coordinator:

1. Review of OSHA Standard, 1910.147, "The Control of Hazardous Energy".
2. Recognition of hazardous energy sources, and the means necessary for energy isolation and control.
3. Affected employees shall be instructed in the purpose and uses of the energy control procedure.
4. All those who may work in the area or may be in the area shall be instructed that equipment or machines isolated by lockout/tagout procedure shall not be used until the energy isolating locks or tags have been removed.
5. Retraining for authorized or affected employees shall be provided whenever there is a change in job assignments, change in equipment, or change in energy isolation control procedures.

LOCKOUT/TAGOUT PROCEDURE

Prior to the commencement of service work, the authorized employee shall make a survey to locate and identify all isolating devices like; switches, valves, or other control devices that are necessary to prevent activation that could cause injury during installation, repair, service or maintenance. Each department will use Appendix A – Loxckout/Tagout Procedures, to document the machines, equipment or systems covered under the scope of this program

Sequence:

1. Notify all affected employees that a lockout or tagout is going to be utilized, and the reason equipment is being affected, and duration.
2. If the equipment is in operation, shut down by normal shutdown procedure (depress stop button, open switch, etc.)
3. Ensure machine or equipment is de-energized to the state that provides for the least stored energy prior to isolation. Isolation of stored energy (such as springs, elevated machine members, rotating flywheels, hydraulic systems, compressed gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as repositioning, blocking, bleeding, etc.
4. Lockout and/or tagout the energy isolating device by the application of the appropriate lockout/tagout components by the authorized individual performing the work.
    a. If more than one individual will be working on the equipment, each individual must place a lockout and tag on the energy isolation device.
5. After application of the lockout device it is required that the operational start button, switch or other control be switched "on" to make certain the equipment will not operate. CAUTION: Return to "neutral" or "off" position after this check.
6. Maintenance work can now commence as the equipment is now lockout and/or tagged out.

RETURN TO NORMAL OPERATIONS

Once service and/or maintenance work is completed and the equipment is ready for operation, the authorized employee performing the work will check with affected employees to ascertain if they are ready to use the equipment.

1. Reinstall all guards and interlocks if previously removed. Remove all tool and equipment used during the work.
2. Only after the above steps are completed can the authorized employee (s) remove the lockout/tagout devices.
3. With multiply lockouts, each authorized employee upon completion of their work must remove their own lockout device.
4. Reenergize the machine or equipment by means of the energy isolation devices.
5. Turn on the machine or equipment using the operational start button, switch or control.
6. After verifying proper operation, the job is considered complete.

CONTRACTORS

Whenever outside servicing personnel are engaged in activities covered by the scope and application of this program the MCAD supervisor will ensure the respective lockout/tagout procedures are coordinated. The MCAD supervisors affected by the scope of this program shall ensure that all employees understand and comply with the contractors energy control program.

EVALUATION OF PROGRAM

The MCAD supervisors affected by the scope of this program and the Occupational Health and Safety Coordinator shall audit compliance with the requirements of this program annually and as necessary.

APPENDI X A - LOCKOUT/TAGOUT PROCEDURE

DEPARTMENT NAME: _____

AUTHORIZED EMPLOYEES: _____

_____

AFFECTED EMPOLYEES: _____

_____

EQUIPMENT, MACHINE, SYSYEM: _____

ENERGY TYPE: _____

HAZARD: _____

LOCKOUT DEVICES: _____

_____

ENERGY ISOLATION: _____
(SEQUENCE OF LOCKOUT)

_____

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